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ABSTRACT

Several general areas of concern exist for those involved in the future of vocational education. Industrial needs and manpower projections should be examined more critically; perhaps the work should be designed for the worker, and perhaps more attention should be directed to national and international job trends, and less to local trends. Changes in student population and Federal legislative policies must also be considered by planners. Vocational education directors have a responsibility to keep current inventories of job opportunities at local, State, national, and international levels. Consideration must also be given to the numbers of students who enter and remain in college and to the selection of vocational education teachers. More efficient use must be made of present school facilities. Teacher in-service and pre-service programs need to be made more effective and industrial arts education and educators need to become more closely involved with vocational education. Vocational education programs must determine carefully their objectives and philosophy. Student needs must be given high priority, and more refined methods of student selection must be developed. (PR)

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FUTURE IMPLICATIONS FOR VOCATIONAL EDUCATION

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We can learn much from the past and the books and articles of bygone days in reflecting about the future. The basis for the future of vocational education has been well-documented in the literature and well-established by federal as well as state legislation from among the various states. What follows is one person's attempt to eyeball the future within the topic as stated, "Future Implications for Vocational Education." In order to delimit the scope and approach to the topic, the word IMPLICATIONS has been used as the key to the development of the topic. That is, each letter from the word will sort of fuel development of a sub-topic related to the topic of discussion. In a few cases, it seemed necessary to the writer to allow a few letters to fuel more than one sub-topic. The writer hopes that the reader will bear with him in taking advantage of this dual approach.

In thinking about the future of vocational education, the writer decided to go back a few years to 1943 and 1965 and review from at least two sources some of the current thinking and ideas of the time. According to Keller (1943) as reported in the National Society for the Study of Education (NSSE) Yearbook on Vocational Education, "Vocational education is learning how to work. For the educator, it is teaching others how to work. In the rise from savagery to civilization, people have learned to work in many different ways. . . ." (P. 4) Keller went on to raise the following questions: "Do we need planned, organized vocational education? Where should vocational education occur? Who should give it? What methods should be used? Who should be the recipients? Who should control and administer vocational education? Obviously, the answers to these questions depend upon the answers to other questions. What is the American, the democratic way? Are all Americans

created free and equal? Are they entitled to equality of opportunity? Is 'any job well done' entitled to the same respect--and the same remuneration?" (P. 4) These written and published words by Franklin J. Keller (at that time, Principal, Metropolitan Vocational High School, New York, New York) in 1943 are still some of the basic questions that many vocational thinkers are asking today, some 32 years later. (Please note that I say thinkers since I do not consider all leaders as thinkers.)

In 1965, the NSSE Yearbook for that year was, again, on the topic of vocational education. Barlow (1965) states the following: "Vocational education has always had a strong social bearing. Vocational education is concerned with people: people who are going to become members of the labor force; people who are members of the labor force; in fact, most of the people who produce the goods and services required by our society." (P. 280) Barlow attempted to eyeball the future and was more correct than incorrect at least to this point in time. He made a statement which should, again, be restated; it was as follows: "Preparing for a vocation is becoming exceedingly complicated by the fact that our occupational structure cannot guarantee stability of an occupation. The job may not exist by the time the student is ready for it, and he may be confronted by job opportunities which were unknown when he began his vocational preparation. The 'broad field' approach has merit, but the present state of development of the idea is somewhat intangible and seemingly related to vocation only by chance." (P. 286) I ask you if these are not still issues in 1975. Have we really made measurable progress in vocational education or in education in general? Or, is it that education as a social science will have to continue to ask and answer such questions.

Those of us involved in vocational education at this time would be well-advised to read and give much consideration to books such as Work in

America (1973) and Studs Terkel's recent book, Working (1972), as we continue to plan for the next few years. A statement by William Faulkner appearing in the Terkel book is worthy of mention because of its implications to vocational educators. "You can't eat for eight hours a day nor drink eight hours a day nor make love for eight hours a day--all you can do for eight hours is work. Which is the reason why man makes himself and everybody else so miserable and unhappy." If you buy this statement by Faulkner, you can see the many implications for those of us who believe in the concept of vocational education. But, we must listen to others who raise questions about the value of the work ethic and those who write and speak about such things as the blue-collar and white-collar blues, the problem of alcoholism and drug usage by many assembly line workers, and the results of a fifteen-year study by Palmore (1969) that indicated that the strongest predictor of longevity was work satisfaction. We must consider these sources along with the recognized needs of learners, both high school and adult age, as we give consideration to the future. We all have an obligation to be informed and up-to-date about such things if we truly believe in the basic concepts of vocational education. These factors have all entered into this writer's consideration of the topic of this manuscript.

I Industrial needs: Vocational education has, through the years, been based upon the industrial demands and needs of large and small employers. Look at any recent state plan for vocational education, and you will see facts and figures which are supposed to be indicators of labor's needs and demands for the next several years. This seems to be a sort of justification for the need for various vocational fields of study. In planning for the local vocational program, the planners generally have to do a needs assessment in order to prove to those who have to approve vocational plans and funds that

industry will need "x" number of workers in certain specified fields of work. Perhaps we have arrived at the point in time when we should take a good, hard look at the objectives of vocational education and see if they live up to current-day humanistic trends in education. We may want to consider the design of work for the worker rather than the worker for work. Using Maslow's hierarchy of human motivation in which ego fulfillment and self-actualization are most important after basic needs have been met, we may want to make work what people want to do. All of us, as potential leaders in our field of endeavor, may want to break out of the stereotype industrial needs approach to vocational program development and be much more concerned with the needs of the students. What do the students want from a vocational program? Story (1974) states, "changing attitudes toward the work ethic challenge our traditional concepts of vocational education." This statement appears in an article entitled "Vocational Education as Contemporary Slavery" and may be worthy of your consideration. The time seems ripe for vocational education to take on a more humanistic nature and concern for the needs of our students who desire a vocational education--whatever it may lead to.

M . Manpower projections: Manpower projections, in a sense, relate directly to industrial needs, and perhaps this item could have been combined with the previous one. However, the writer felt it sufficiently important to let it stand alone. The United States Department of Labor as well as the various state-level departments of labor and employment are required to crystal ball the future and make projections about manpower needs in the country. I would suggest that such projections are based upon the projected needs of industry and, as such, are as accurate as the industrial projections tend to be. From my own experience in one part of the country, I will flatly tell you that I put little faith in such projections as

predicators of what types of vocational programs to offer. One could probably do as well by going to a fortune teller for the same kind of advice. This is not so much a criticism of the United States Department of Labor as it is of industry's inability to forecast its own needs since so many variables come into play regarding the economic conditions of our country. It is this writer's belief that the Labor Department would better concentrate its effort on the development of an effective national job bank rather than short and long-range projections. As educators, we might better concentrate our efforts by encouraging students to be mobile and to go where the jobs are. That is, of course, if the employment service can provide such information for people. I would advise vocational educators to be very careful in their use of manpower projections in the development of programs at the local level. We must be more concerned with national and international trends in the job market.

P Population, increase, zero growth, negative: We hear and read much about future trends in population. Will it increase, decrease, or remain the same? That is the question. The question for vocational educators will center on the implications for new or expanded facilities and curriculum. Depending upon where you live in this country, you may find school districts adding new staff members while others are being forced to let tenured staff members go due to a declining student population. Growth can occur in a certain district, even with a declining birth-rate at the national level, due to industrial development and the mobility of population in seeking out a more desirable area in which to live. You may want to look for certain signs of a decreasing student population in your own area. These signs may be: First, a declining student population within a district; Second, the move from a half-day to a full-day kindergarten program as a means of not

having to let one or more kindergarten teachers go; Third, a decreasing teacher-student ratio. (However, this writer is aware of a city school district which, over the last ten years, has decreased in student population by about 15,000 while at the same time adding over 200 staff members.) Population and its effect on vocational education will affect the delivery of vocational services at the college, community college, and high school levels. It should be of concern with those planning programs for those levels including teacher education. However, it is possible that vocational education programs could expand even in a decreasing population if they can attract a larger percentage of the students who are now in college preparatory or general education programs.

L Legislation policy: Many times when someone at the local level comes up with an apparent good idea which would or could benefit vocational education as well as the student, he/she is met with the comeback, "Sorry, federal legislation will not allow it." I think that the time is right for the vocational educators to go on the offensive rather than stay on the defensive. By this, I mean in my eighteen years in public education, it has always been necessary to defend what has been taking place in vocational education rather than cause others to defend what they are doing. The merger of vocational education and non-vocational that has been talked about under the cover of Career Education has not happened yet. Perhaps it will occur within the next ten years. But, I believe, now is the time for vocational educators to move to the offensive under a strong legislative program which will allow more consideration on the benefits to the learner rather than the benefits to industry and society. As Barlow (1974) states in the Fourth American Vocational Association Yearbook, "Since the prime purpose of vocational education is to prepare individuals for the world of work, a moral

issue suggests that they must be assured that they can find employment. Vocational education is not consummated until its participants are in jobs that meet their aspirations and capabilities." (P. 273) The statement is beautiful in the sense that it uses the aspirations and capabilities of the participant rather than the needs of the industrial community as the goal. But, on the other hand, according to Barlow, the payoff in the form of a job has to be a part of the vocational program. From my point of view, vocational education can serve a purpose if students are satisfied with the program, would take it over again if they had the choice to make over again, but decide not to enter the area that they prepared for. I can justify this on the basis of learner satisfaction and fact that many students in college preparatory programs do not start or finish college. Let's apply the same standards of program evaluation to the graduates of vocational programs as are applied to college preparatory graduates. The results may be as follows: 50% of the vocational graduates of the class of 1975 entered jobs related to their program; 40% of the college preparatory graduates of the class of 1975 entered some form of college level program.

In order for this to happen, we will need a strong federal legislative policy which will be more concerned with humanistic education rather than preparing future workers for the industrial machinery of this country.

I Inventory, continually, job opportunities: As long as we have the same philosophy and employment goals for vocational education, we must take the responsibility of maintaining an up-to-date inventory of job opportunities. However, this inventory or job bank must be more than just concerned with the local area and the state; it must be national and, in fact, international in scope. The vocational director at the local level must take the responsibility for keeping the inventory at the local level.

Some other agency must take the responsibility for it at the state, national, and international levels.

It should still be apparent that we have much need for remedial education and upgrading for adult workers. The present administration in Washington has been pouring much money into the Comprehensive Employment and Training Act (CETA) titles within the past year. Many, many millions of dollars are being put in the supported employment titles of the act to create jobs in the public service areas and with non-profit agencies. Little, if any, on the job training goes on in these kinds of programs, and the future for supported employment beyond the time of federal funding is not clear at this time. What role have you or could you be playing in regard to this CETA legislation?

It appears that each year we are still not stemming the flow of people into the pool of the underemployed or unemployed, and that it becomes necessary to try remedial measures to get them from that pool back into the pool of the employed. What is the answer? Our vocational graduates are going to be competing with many skilled and semi-skilled workers for the same jobs. Who will be employed first, the 18-year-old fresh out of vocational school or the 30-50-year-old with ten or more years of experience and a family to support? I maintain that vocational educators have a responsibility to maintain a continual, up-to-date inventory of job opportunities and take an active role in the placement of vocational graduates. If the job after graduation is not in the field of specialization, we may have lost a competent, satisfied worker who never will return to his area of training.

C College and those who need college/curriculum/counseling: The U.S. Department of HEW (1974) reports that 24% of U.S. secondary school students will drop out before graduation, which means that 76% actually graduate. Seventy-six per cent of currently enrolled secondary school students

are enrolled in college preparatory or general curriculum programs, and 24% are enrolled in vocational education programs. Twenty-three per cent of U.S. secondary students will graduate from college. The U.S. Department of Labor predicts that 20% of the job openings during the 70's will require a four-year college degree; whereas, 80% will require a high school diploma or training beyond high school but less than four years of college. If these sources are correct, I ask you if the present state of affairs is not reversed.

The previous statements reflects the need for a curriculum that is responsive to the needs of the future worker but does force or require an early decision on the part of the student. Implications exist for those whose responsibility is curriculum planning and for those in the counseling arena. If schools are able to move into a Career Education type of program, both of these problem areas could be improved. If we could be successful in infusing career education principles into the curriculum, students would be better able to make their own career decisions in spite of some poor counseling that may exist in some schools. However, I am sick of hearing the blame for some of the failures of vocational education dropped into the lap of those who counsel vocational students into or away from our programs. This we can have with good teachers who believe in what they are doing, rather than those who leave the trades or industry because they could not advance or hated their work. I do not envy those of you who have to select a teacher from among a number of applicants or those of you in college pre-service programs who have to select candidates for your programs. We need more help and research in regard to vocational teacher selection strategies.

Especially in secondary schools the curriculum is typically not realistic in terms of meeting student career needs.

WHAT'S HAPPENING TO THE STUDENTS?

1. Dropouts from U.S. secondary schools

24% drop out of school before graduation

76% actually graduate

2. Choice of curriculum among U.S. secondary school students

76% are enrolled in college preparatory or general curriculum programs

24% are enrolled in vocational education programs

3. Relatively few U.S. secondary school students graduate from college

23% will graduate from college

77% will not graduate from college

Source: *Digest of Educational Statistics, 1974 Edition*, Office of Education, U.S. Department of Health, Education and Welfare

THEREFORE: We need CAREER EDUCATION for all students to reduce the gap between unrealistic educational programs and career needs.

Jobs in the 70's demand specialized training, not necessarily a college degree.

U.S. JOB OPENINGS DURING THE 70'S

20% of jobs require a 4-year college degree

80% of jobs require a high school diploma or training beyond high school but less than 4 years of college

Source: U.S. Department of Labor

THEREFORE: We need CAREER EDUCATION to provide students with insight, information and motivation concerning specialized training as well as professional education.

A Adult education/training/retraining: Most "good" vocational education programs and their sponsors have always been interested in a supportive adult education program. As most of you realize, it is not uncommon to have a larger adult education enrollment than the day school enrollment. As I travel and visit vocational schools in the United States, it seems to me that the really impressive programs have a very serious commitment to adult training and retraining programs and usually have a larger adult program enrollment than day school enrollment. This does not imply that you can evaluate the quality of the program on the basis of number of adults enrolled but rather of a school commitment to adult vocational education.

Does your school have a part of the action of the CETA program? Does your school have a contract with one or more of the prime sponsors in your area? It seems to me that vocational educators have the necessary skills, facilities and equipment to get a piece of the action made possible by the CETA legislation. It appears to this writer that vocational educators are as well as, if not better, equipped than some of the agencies that are gaining CETA contracts for training.

Many vocational schools are locked up tight during the summer months. This seems a waste of some tremendous facilities and for those teachers needing summer employment, a waste of professional talent. Why not attempt to make full use of our facilities for adult learners or high school age students who are not interested in the program during the normal year?

I would like to see someone fund a three-year summer program in a vocational center/school in which college preparatory, general program, or adult learners could take the normal program but do it over three, ten-week summer sessions on a full-time basis. This would be one way to get many students into vocational programs who would not usually have the opportunity

to participate. It would get more usage out of existing facilities and perhaps do much to improve the image of vocational education. If anyone is aware of such programs, this writer would like to be advised of such programs and their locations.

T Teacher education, needs, in-service and pre-service: It still appears, at this time, that a need exists for vocational education teachers in most of the service areas. This is, indeed, an encouraging sign while, at the same time, many academic areas are overcrowded. It has been said that, in some areas of specialization, outside of every classroom door one or two people are waiting for the person inside the room to retire, resign, or drop dead. I know of certified teachers who are willing to start as teacher aides with the hope that they will be employed when a job in the school becomes available. In our field, it seems that we should still encourage good people to prepare for the profession. If a day of a surplus of vocational teachers does occur, it could result in that those responsible for hiring teachers will have a much more difficult job in selecting the right person for the job. There are advantages and disadvantages of a surplus of teachers in any area.

As many states are moving toward competency-based teacher education programs, vocational educators will be expected to do likewise. Careful consideration will have to be given to the selection of the competencies and the evaluation criteria used to evaluate the student's performance. Care will need to be taken if national performance examinations are used to measure an individual's competency in the technical skill area. Will such examinations be kept up-to-date, and will they be suitable indicators of matching the skills-desired to the skills-possessed?

Those responsible for the delivery of vocational teacher education services will have to give as much consideration to in-service education

and upgrading as they have to pre-service programs. Serious consideration of a kind of sabbatical leave program for vocational teachers should be on the agenda of forward-looking state divisions of vocational education. This plan could be in the form of an exchange for the teacher every five years, which would allow/require him/her to work six months in the field every five years. This would be one form of professional and technical updating.

Teacher educators should take a good look at the criteria used in their departments for the selection of pre-service and in-service vocational teachers. As a result of economic surges, we may find more and more skilled and semi-skilled workers who may want to enter teaching. As a result, teacher educators should do some serious thinking about the types of people needed at the present and within the next few years.

I Industrial arts education: It seems to this writer that the time for industrial arts education and educators to get more closely involved with vocational as well as career education is now. Success in careers requires, among other things, adaptability to technological change. Traditionally, industrial arts programs have provided for the development of a broad range of competencies in the technologies as a base for career adaptability. It seems that the established industrial arts programs in our schools would be a natural for the foundation of a career education program. The preparation of industrial arts teachers has always been rather broad, and, as such, the teachers are generally aware of many different careers. It would seem that a more direct relationship should exist between industrial arts programs, career education programs, and the vocational education programs. We have given this lip service, but it does not seem that the gap has been narrowed to any great extent. Some of the leadership in the recent career education movement has come from industrial

arts people, but I feel a still greater contribution could be made.

Industrial arts educators, along with the business, home economics, and art educators in our public schools, can provide the needed expertise to put together a really meaningful career education program. However, it seems that in many cases, these practical arts educators never attempt to coordinate their efforts or programs so that one supports the other. Such a joint planning effort would further support the vocational programs within the school or at the local vocational center/school.

The time seems right for a serious attempt to evaluate the success of industrial arts programs in terms of their stated objectives. This would require a sort of self-inspection of what the objectives of industrial arts in your state and within your school are. What is the basic philosophy of the industrial arts program? What are the stated objectives? How well are the industrial arts programs meeting the stated philosophy and objectives? That is the question.

It seems that industrial arts educators are in the best position to give leadership to the career education programs at the elementary, middle, and high school levels. As such, they would be providing a much firmer base for the capstone program, namely the vocational education program which may take place at the high school or post-high school level. If you are in the industrial arts field, I challenge you to consider the implications of what has been stated.

0 Objectives of vocational education: I have recently had the opportunity to work with a local vocational program in an effort to develop objectives for the program and a scheme of evaluation to measure how well they were measuring up to the established objectives. The involvement started when one of the sending districts began to question the effectiveness of the

vocational program, and it became clear that the existing objectives of the program were rather general, vague and impossible to evaluate. This primed the way for a program to develop objectives and a system of evaluation based upon the objectives. To cut a long story short, the following objectives were approved by the Board of Education after being considered by the teachers and administrators of the schools. (Pautler, 1974)

1. Upon completion of an occupational education program, 65% of the students will rate the experience satisfying.
2. Upon completion of an occupational education program, 65% of the students will indicate that they would tend to take the same program again if they had to make the choice over.
3. Upon completion of an occupational education program, 60% of the students available for employment or advanced education will indicate that they plan to enter the area of specialization they prepared for or go on to advanced training/education in their area of specialization.
4. Seventy-five per cent of the graduates of any licensed occupation program will pass the appropriate examination (i.e., cosmetology, L.P.N., etc.).
5. Within six months after graduation, 60% of the graduates available for and having sought employment will be employed full-time.
6. Within six months after graduation, 5 % of the graduates available for and having sought employment in their specialization will be employed full-time.
7. Within six months after graduation, another 15% of the graduates available for and having sought employment in their specialization will be employed full-time in a position they considered related to their area of specialization.

These seven objectives form the direction for the program. You will note that success is not completely based upon placement rate but includes satisfaction and desire to enter the area of study. These objectives can and will be evaluated on a yearly basis and serve as evidence of success or failure in terms of the criterion measures established. The objectives are subject to yearly review and modification as need be.

Please consider a review of the philosophy statement and objectives that set the tone for your program of vocational education. This consideration could take place at the national, state, or local levels. But, the most

important point is that it take place within the vocational program you are involved with. What are the objectives of vocational education?

N Needs of students, society, industry: In consideration of the objectives for vocational education, we should consider the needs of students in the present day society which includes the work place. Most people will need work to provide for the basic needs of food, clothing, and shelter. It is in this area that the real value of vocational education can be displayed. It seems more and more essential to first have an education and second a salable skill, but even these two items in some cases are not sufficient in a tight labor market with a high rate of unemployment. We must encourage our students to be mobile and prepare them to adjust to living in different areas of the country or world. We must also develop a system that will tell us there the jobs are and how to make contact with those who are doing the hiring. The United States Employment Service must take the leadership in developing such a national job bank.

The educational program must expand beyond the walls of the school and into the industrial community. We must consider revising institutional procedures, schedules, and curriculum to permit greater flexibility, such as shorter courses, after hours and weekend use of facilities for retraining and basic adult education, and outreach programs. We must stand ready to phase out obsolete programs which are not relevant to labor market demands. We must be prepared to retrain those teachers who are involved in such programs and prepare them for new teaching assignments in other specializations.

In being responsive to the needs of students, society, and industry, we must be willing and able to provide accelerated courses or mini-courses where necessary to retrain the unemployed for available jobs as quickly as possible--combining classroom instruction with supplemental on-the-job

training where applicable.

S Student selection/worker satisfaction: Student selection for vocational programs and worker satisfaction in the work place seem to have implications for vocational educators. How can we be assured that those students who are selected for vocational programs will be satisfied workers five or ten years later? I doubt if we can or ever will be able to do it.

In regard to student selection, it seems that vocational programs operate at two different extremes. Some programs with many more applicants than they can handle are faced with making decisions on who to select for the vocational programs. The other extreme is that many programs work on an open admissions policy in that any student who desires a certain vocational program, to the extent of room available, may take the program. (This fact has considerable implications for the objectives of any given vocational program.) The best study and data available, as far as this writer is concerned, dealing with predicting vocational success is by Pucel and Nelson (1972). The following statement from their Summary of Findings is worth restating:

> The standardized test instruments incorporated in the Project MINI-SCORE test battery were not effective in predicting the various criteria of vocational training success such as graduation versus dropping out; being employed in training-related work versus being unemployed or working in a non-training-related job; or being employed in a training-related job one year after graduation versus dropping out. Likewise, the instrument scores failed to provide significant findings associated with job satisfaction and job satisfactoriness. (P.62)

On the basis of available standardized instruments, I am willing to conclude that our methods of selecting vocational students are, at best, rather crude. This is an area that needs much more research.

In regard to worker satisfaction, I suggest that WORK IN AMERICA (1973) and WORKING (1972) be required reading for all present and future vocational

educators. We have a very real consideration in program planning and curriculum for our vocational programs when you look at the implications based upon worker satisfaction. The need may center on the redesign of work in the work place rather than in the preparation of people for life including work. Lufthansa has experimented with "Gleitzeit," or gliding work time, which means that a work place is open for business, say between 7:00 a.m. and 7:00 p.m., and that workers can choose any time to start and go home at any time--as long as they work for a total of 40 hours per week. This redesign of work experiment provided greater worker freedom and flexibility. They also experienced a 3% to 5% increase in productivity. (WORK IN AMERICA, P. 118)

Perhaps we should look at the redesign of our educational program if that, too, could result in an increase of educational productivity.

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